

AMENDMENTS TO THE CLAIMS

Listing of claims:

This listing of claims replaces all prior versions and listings of claims in the application.

1. (Previously Presented) A method for fabricating a semiconductor device comprising the steps of:

forming an opening in an insulation film;
forming an interconnection layer of Cu as a main material in the opening; and
concurrently spraying nitrogen gas and water on the surface of the interconnection layer buried in the opening.

2. (Currently Amended) A method for fabricating a semiconductor device according to claim 1, further comprising, after the step of concurrently ~~injecting~~ spraying the nitrogen gas and the water, the step of

forming a diffusion preventing film for preventing the diffusion of the Cu on the insulation film and the interconnection layer.

3. (Original) A method for fabricating a semiconductor device according to claim 2, wherein the diffusion preventing film is an SiC film or a silicon nitride film.

4. (Currently Amended) A method for fabricating a semiconductor device according to claim 1, further comprising, after the step of concurrently ~~injecting~~ spraying the nitrogen gas and the water, the step of

applying hydrogen plasmas to the surface of the insulation film and the surface of the interconnection layer.

5. (Currently Amended) A method for fabricating a semiconductor device according to claim 2, further comprising, after the step of concurrently ~~injecting~~ spraying the nitrogen gas and the water, the step of

applying hydrogen plasmas to the surface of the insulation film and the surface of the interconnection layer.

6. (Currently Amended) A method for fabricating a semiconductor device according to claim 3, further comprising, after the step of concurrently ~~injecting~~ spraying the nitrogen gas and the water, the step of

applying hydrogen plasmas to the surface of the insulation film and the surface of the interconnection layer.

7. (Original) A method for fabricating a semiconductor device according to claim 1, wherein in the step of forming the opening, the opening containing a via hole and an interconnection trench formed in a region containing the via hole is formed.

8. (Original) A method for fabricating a semiconductor device according to claim 2, wherein in the step of forming the opening, the opening containing a via hole and an interconnection trench formed in a region containing the via hole is formed.

9. (Original) A method for fabricating a semiconductor device according to claim 3, wherein
in the step of forming the opening, the opening containing a via hole and an
interconnection trench formed in a region containing the via hole is formed.
10. (Original) A method for fabricating a semiconductor device according to claim 4, wherein
in the step of forming the opening, the opening containing a via hole and an
interconnection trench formed in a region containing the via hole is formed.
11. (Currently Amended) A method for fabricating a semiconductor device according to
claim 1, wherein
in the step of concurrently ~~injecting~~ spraying the nitrogen gas and the water, the water to
be concurrently injected with the nitrogen gas is carbonated water or ozonized water.
12. (Currently Amended) A method for fabricating a semiconductor device according to
claim 2, wherein
in the step of concurrently ~~injecting~~ spraying the nitrogen gas and the water, the water to
be concurrently injected with the nitrogen gas is carbonated water or ozonized water.
13. (Currently Amended) A method for fabricating a semiconductor device according to
claim 3, wherein
in the step of concurrently ~~injecting~~ spraying the nitrogen gas and the water, the water to
be concurrently injected with the nitrogen gas is carbonated water or ozonized water.

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14. (Currently Amended) A method for fabricating a semiconductor device according to claim 4, wherein

in the step of concurrently ~~injecting~~ spraying the nitrogen gas and the water, the water to be concurrently injected with the nitrogen gas is carbonated water or ozonized water.

15. (Currently Amended) A method for fabricating a semiconductor device according to claim 7, wherein

in the step of concurrently ~~injecting~~ spraying the nitrogen gas and the water, the water to be concurrently injected with the nitrogen gas is carbonated water or ozonized water.